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ABSTRACT

The ERIC Review is published three times a year and announces research results, publications, and new programs relevant to each issue's theme topic. This issue examines education-community-business partnerships via two principal articles: "Collaboration To Build Competence: The Urban Superintendents' Perspective," by Terry A. Clark; and "Higher Education-Business Partnerships: Development of Critical Relationships," by Diane Hirshberg. In addition the following features are provided: (1) Recent Federal Partnership Initiatives; (2) Partnership Resource List, which includes organizations and associations, clearinghouses, and federal agencies; (3) General Reading List, which provides an annotated bibliography of 41 titles; (4) a research article, "School-to-Work Transition: Its Role in Achieving Universal Literacy," by Susan Imel; and (5) an annotated list of 33 new publications produced by the ERIC clearinghouses and the Office of Educational Research and Improvement. (ALF)

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THE ERIC REVIEW

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Education-Community-Business Partnerships

Edit View

Articles

Collaboration To Build Competence

Higher Education-Business Partnerships

School-to-Work Transition

Features

- Resource Organizations
- Reading List
- Federal Initiatives
- ERIC System Developments

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An Important Message to Our Readers

This issue of *The ERIC Review* focuses on partnerships involving schools, colleges and universities, businesses, and communities. Such collaborative relationships expand the resources available for education improvement and help prepare students to be informed, responsible citizens and productive members of the work force.

As Terry Clark notes in an excerpt from *Collaboration To Build Competence: The Urban Superintendents' Perspective*, partnerships exist along a continuum. They may be as simple as a one-on-one relationship between an elementary school and a local business whose employees provide afterschool tutoring or as complex as a comprehensive collaborative involving education, business, government, and community leaders working to provide for the full health, education, and training needs of urban youth.

Because education is a cumulative, lifelong process, education-community-business partnerships can span the whole education spectrum, from prekindergarten to postsecondary. Partnerships involving institutions of higher education may focus on strengthening teaching and learning in schools, preparing students for work, or enhancing the productivity of those already in the workplace. Diane Hirshberg presents an overview of the latter kinds of partnerships in "Higher Education-Business Partnerships: Development of Critical Relationships."

In some communities, business leaders and other concerned citizens have begun to act to reform or restructure education and to strengthen the links between education and the workplace, particularly for economically disadvantaged and non-college-bound youth. These efforts are the subject of this issue's Research in Action section on page 21.

A list of resource organizations, federal initiatives, and additional readings on education-community-business relationships will help you pursue the topic. To find out more about how the ERIC System can help meet your education information needs, write to ACCESS ERIC or call the toll-free number, 1–800–LET–ERIC (538–3742). The materials contained in this journal are in the public domain and may be reproduced and disseminated.

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The ERIC Review, published three times a year by ACCESS ERIC with support from the U.S. Department of Education's Office of Educational Research and Improvement (OERI), announces research results, publications, and new programs. *The ERIC Review* also contains information on programs, research, publications, and services of the Educational Resources Information Center (ERIC), its subject-specific clearinghouses, and support components. The ideas and opinions expressed in this publication do not necessarily reflect the positions or policies of the Department of Education or OERI.

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THE ERIC REVIEW

COLLABORATION TO BUILD COMPETENCE: THE URBAN SUPERINTENDENTS' PERSPECTIVE

by Terry A. Clark

Because schools are charged with educating children, they are home to children for a good part of each day and for many days each year. They are the public agency most often called upon to nurture children and to provide leadership in addressing their needs. Many urban public schools find it increasingly difficult, however, to provide high-quality education to those from impoverished and disconnected homes.

Partnerships between schools and their communities provide a mechanism for assisting these children through enhanced and coordinated services. Traditional educational partnerships—particularly those between schools and businesses—are considered valuable to the extent that partners have helped reduce illiteracy, provided assistance in work experience and college scholarships for students, enlisted volunteers for individual schools, and donated equipment. Such one-on-one institutional partnerships are the most basic types, as viewed on a continuum such as that in the exhibit. Partnerships broaden the education schools provide through tutoring and mentoring programs, recognition and incentive awards, field trips, and dropout prevention activities.

A National Center for Education Statistics (NCES) survey found that in 1987 through 1988, 40 percent of the nation's public schools had some kind of formal partnership with an external institution. In urban areas, 54 percent of partnerships are with businesses, another 17 percent are between schools and civic or service organizations, and 9 percent are with postsecondary institutions.[1] Eighty percent of urban education partnerships are initiated by school system staff. They report wanting partnerships to foster school-community cooperation (35 percent), provide incentives for students (25 percent), supplement curriculum and staff (23 percent), and obtain equipment (11 percent) (NCES, 1989).

Some partnerships attempt to branch out to involve multiagency, multiservice projects that are jointly planned and governed. These types of collaborations—many of which have been functioning for several years—are depicted as cooperative agreements on the partnership continuum displayed in the exhibit. They are characterized by formal agreements about each partner's responsibilities and expected outcomes, and they imply a reciprocal commitment between or among partners. Activities might include staff development, advocacy for education policy, targeted services for specific age groups, and magnet school support. Many are focused on a particular area, such as dropout prevention, teenage pregnancy, or employability training.

Among the cooperative agreements established across the country are the Boston Compact, a set of formal agreements between the public school system and local businesses, universities, and labor, promising postsecondary opportunities to graduates; the Los Angeles Educational Partnership, a collaboration of corporations, universities, and community leaders, which has raised more than $7 million for school improvement; and the Minneapolis Youth Trust, a collaborative of major employers, city and state agencies, social service organizations, and the public schools, which has developed an apprenticeship and summer employment initiative and a mentorship program.

Comprehensive Collaboratives

A few districts have collaboratives that have reached beyond cooperative agreements. They exemplify the comprehensive collaboratives represented on the continuum as the most sophisticated and fully developed partnerships. Broad-based and involving multiple organizations, they require long-term institutional commitment. They proceed with a commonly shared vision, goals and objectives developed

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Terry A. Clark is President of Education Resources Group in New York City and author of the report, *Collaboration To Build Competence: The Urban Superintendents' Perspective*, from which this article was adapted. The Urban Superintendents' Network, sponsored by the U.S. Department of Education's Office of Educational Research and Improvement, includes superintendents from the nation's largest urban districts who meet regularly to explore and share strategies for improving urban education.

A Continuum of School-Community Partnerships

Institutional One-on-One
(Sponsor → Beneficiary)

Focuses:

1. Tutoring
2. Mentoring
3. Field trips
4. Guest speakers
5. Summer jobs
6. Paid work-study
7. Scholarships
8. Incentives/recognition awards
9. Demonstrations
10. Use of business facilities
11. Loaned executives
12. Volunteers
13. Minigrants for teachers
14. Teaching assistance
15. Equipment/supplies donations
16. Public relations

Cooperative Agreements
(Sponsor ⟷ Beneficiary)

Focuses:

1. Needs assessment
2. Planning
3. Research and development
4. Training in new technology
5. Teacher/administrator professional development
6. Advocacy—policy/laws
7. School-based health clinics
8. Magnet schools
9. Funds to support innovation
10. Advice on restructuring schools
11. "Focused" (e.g., on dropout or teen pregnancy prevention)

Comprehensive Collaboratives
(Sponsors ⇄ Beneficiaries)

Focuses:

1. Needs assessment
2. Broad-based multiagency planning
3. Research and development
4. Long-term institutional commitment
5. Commonly defined vision
6. Goals/objectives by consensus
7. Shared authority/decisionmaking
8. New roles/relationships
9. Advocacy—policy/laws
10. Integration of multiple services
11. Cross-institutional programs
12. "Comprehensive" services, focusing on the whole child

through consensus, shared authority and decisionmaking, new roles and relationships for the various players, integrated delivery of multiple services, and cross-institutional activities. Most importantly, they address the comprehensive needs of children, from preschool through high school.

The mission of comprehensive collaboratives is to create a dynamic force to provide coordinated, quality programs and services to children and families in order to enable students to function more successfully in school and society. The key goals of comprehensive collaboratives—as defined by the Urban Superintendents' Network—are to reduce the number of school dropouts, increase the number of high school graduates competent to enter the work force or postsecondary education, and ensure the capacity of graduates to participate effectively in the social, cultural, political, and economic life of the community. In essence, collaboratives are decisionmaking bodies designed to use the various resources and service-delivery systems of member organizations to serve the needs of children more comprehensively and efficiently.

Two noteworthy examples of comprehensive collaboratives are the Cincinnati Youth Collaborative and the Portland Investment. The Cincinnati Youth Collaborative (CYC), which began in 1987 and has raised $6.9 million in pledges, has developed diverse and far-reaching initiatives, including a preschool program for 3-year-olds, a summer jobs program to motivate middle school students to stay in school and to achieve academically, a mentorship program, and a college scholarship fund. Members of the CYC steering committee represent local businesses, including Procter & Gamble, which spearheaded the collaborative, as well as the Cincinnati Public Schools, the teachers union, the parent-teacher association, universities, religious groups, community-based organizations, and county social service agencies. The success of the Cincinnati Youth Collaborative, which serves more than 3,500 youth, will be measured in terms of participants' school attendance, performance, and graduation rates.

The Portland Investment is a long-term plan developed in 1983 by the Portland Leaders Roundtable to implement activities focused on dropout prevention, employability training, and work experience for low-income, minority youth up to age 21. It is directed by a

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committee that includes the chief executive officer of the city's largest bank, the mayor, the chairman of the Private Industry Council, the school superintendent, and the chair of the Portland Chamber of Commerce. Roundtable at-large members include representatives of organized labor, area colleges, the United Way, the Urban League, the school board, the governor's office, and area businesses.

The Portland Investment serves more than 2,300 youth through more than a dozen programs with operating budgets totaling $4.6 million. Key projects involve prenatal and child-care services for teenage parents, a comprehensive health-screening program for preschoolers, a neighborhood program for at-risk elementary students, support services and basic skills classes for eighth-graders, a school-to-work transition program for juniors and seniors, and the Youth Employment Institute for out-of-school youth.

Identifying Key Collaborative Players

Studies show that the superintendent's leadership is an indispensable motivating factor in successful school–community partnerships and school improvement involving the community. According to a RAND Corporation review of promising innovations in six school districts, school superintendents help:

- Create a public mandate for the schools.
- Advocate for *all* racial/ethnic groups.
- Increase and maintain the flow of information to the public.
- Encourage staff professionalism (Hill, Wise, and Shapiro, 1989).

In some communities, leadership comes from the business sector, which has shown strong support for public education. Based on its involvement with the schools, the National Alliance of Business notes in *A Blueprint for Business on Restructuring Education* (1989) that business people must understand three axioms if they are to work productively with public schools:

- They must recognize that the crisis in American education is critical to them.
- They must learn about education if they expect to make viable, adaptable recommendations.
- They must view their connection to education as an ongoing, long-term effort.

"If comprehensive collaboration is to succeed, community organizations and the community of parents also must be involved."

If comprehensive collaboration is to succeed, community organizations and the community of parents also must be involved. Every urban area has a unique configuration of community organizations that play more and less dominant roles, depending on the cultural and economic environment of the city. These include local groups serving particular ethnic/racial populations, churches, youth-serving agencies, health agencies, hospitals, other service agencies (e.g., human resources, justice, mental health, and transportation), and local affiliates of such national organizations as the Urban League.

Parents are almost always the least represented constituency on partnerships, task forces, and commissions that focus on the needs of children. In too many instances, the professionals representing school systems, community organizations, business, and civic groups are well-educated and middle-class parents whose children are enrolled in private schools and are thus unaffected by the results of the partnerships. Often, the voices of parents whose children *are* being served are unheard and unheeded.

Learning From Successful Collaboratives

Although few school/community partnerships have been formally evaluated—and this is a major shortcoming—enough is known from documentation of their implementation and products to indicate that both concept and practice are maturing. Criteria for identifying successful collaboration generally include such factors as length of time in operation, range and diversity of membership, visibility of collaborative activities, evidence of benefits to students, and products. Summaries compiled by researchers at major universities, research and evaluation firms, and corporations suggest that the primary elements of success include the following kinds of characteristics:

- A shared vision, written goals, and objectives.
- A commitment of top-level institutional support and visibility.
- A willingness to cross traditional institutional boundaries.
- A willingness to be flexible, to subordinate traditional roles, and to adopt new ones.

In addition, successful collaboration requires a formal organizational structure, long-term commitment, and diverse membership. Based on their experiences, members of the Urban Superintendents' Network provided advice on the "do's and don'ts" of partnerships and collaboration. The following two recommendations were made consistently:

- Do keep lines of communication open by disseminating information honestly and regularly to all partnership members.
- Do operate with the strong support and involvement of all partners from the outset.

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The overriding "don't" for collaboration was: Don't be impatient! Change takes time!

Measuring Success

Evaluating progress is key to understanding whether and how a collaboration is working. It is critical to plan at the outset mechanisms for measuring the process of collaboration and its effects on students. Collaborative leaders can establish straightforward record-keeping and tracking systems to help measure progress and outcomes. For example, records for each student participating in a dropout prevention program might include hours of participation, entry and exit dates, school attendance, grades, test scores, and courses completed. Analysis of these data after a certain time period—a semester or a school year, for example—can range from simple tallies to sophisticated measures of change in attendance or achievement.

Each collaborative will have unique program objectives that, in the end, must be measurable. Collaborative members must agree on what constitutes progress and reasonable evidence of success, whatever program they are implementing or sponsoring. They must recognize uncontrollable factors—independent of the collaborative—that may affect its outcome. They also need to distinguish between program processes and program outcomes. Addressing the need for outcome measures—based on program goals and objectives—and identifying them from the beginning are two essential steps in preparing for program evaluation.

Shaping Collaboratives for the Future

Within the process of initiating collaboration, there are a number of issues related to participation, coordination, and structure that must be addressed. These include:

Participation

- Ensuring that participation includes the community's diverse ethnic and cultural elements.
- Soliciting top CEO support and leadership from each sector of the community.
- Involving the media in eliciting broad community support.
- Working out turf issues that may inhibit smooth functioning.

Coordination

- Ensuring that responsibilities are clearly delineated and supported by all partners.

> ***"Collaborative members must agree on what constitutes progress and reasonable evidence of success . . ."***

- Sharing leadership among collaborative partners.
- Articulating both the school's and the community's objectives.
- Articulating and responding to students' needs.
- Building trust, flexibility, and open communication among partners.
- Designing methods for measuring school performance and student outcomes.

Structure

- Exploring alternative structures.
- Institutionalizing the collaboration.
- Funding the management structure.

In "Building Coalitions for Support of Schools" (Hart, 1988), the Oregon School Study Council recommends the following set of strategies designed to result in a functioning community collaborative:

1. Identify an issue and contact other groups with an interest in it. This process is traditionally referred to as needs or problem identification.

2. Identify and recruit the people or community sectors who can participate in the collaborative. Develop lists of categories of potential members (such as businesses and civic groups); make an inventory of services and service providers; and identify key interest groups (such as parents, large property owners, utility companies, financial institutions).

3. Adopt a formal structure and put together a governing board that will be able to establish operating procedures and generate funds. The formal structure is important to ensure the continuation of the collaborative even when key personalities depart.

4. Form committees to oversee the collaborative's planned activities once the organization and governing board are established. Committees could establish bylaws, conduct needs assessments, develop goals and objectives, explore options for raising funds, or plan public information activities.

The organizations and individuals involved in collaborations must be prepared to expend time and energy, take action and risks, and compromise or arrange tradeoffs where necessary (Hord, 1986). The potential benefits to members and to the public are great: enhanced or expanded services and better, more efficient delivery to those in need.

Integrated delivery of services to children, youth, and their families will increase the likelihood that young Americans will become healthy, educated, and responsible adult citizens. The Urban Superintendents' Network urges colleagues to explore the possibilities, broaden their perspectives, and lower the bureaucratic barriers that inhibit children from realizing their full potential.

For more information about the OERI Urban Superintendents' Network, contact Mary Campbell, Coordinator, OERI Urban Superintendents' Network, U.S. Department of Education/OERI, 555 New Jersey Avenue NW, Washington, DC 20208–5644; (202) 219–2130. To order the report, *Collaboration To Build Competence: The Urban Superintendents' Perspective* (#065–000–00475–5), send $4 to New Orders, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250–7954.

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[1] The National Association of Partners in Education (NAPE), with funding and technical assistance from NCES, surveyed the status of partnerships in the 1989–90 school year. A total of 51 percent of districts reported a partnership program that year. In urban areas, more than 70 percent of the partnerships involved a corporation and/or small business, 63 percent involved a civic organization or service club, and 59 percent involved a college or university. For more information on these findings, contact NAPE, 209 Madison Street, Suite 401, Alexandria, VA 22314; (703) 836–4880.

Lessons Learned: Balancing Academic and Business Issues

As businesses and schools forge new relationships for school improvement, concerns have arisen that business needs and academic interests are not always one and the same. Schools have a broader mandate than simply equipping students with workplace skills, and where job-related skills support the school's academic mission, questions remain about how best to teach them. The recently released *Excellence at Work: Policy Option Papers for the National Governors' Association*, for example, takes a skeptical view of education's ability to prepare students for work, suggesting instead that work force preparation systems be market-based.

The potential for misunderstanding exists between business leaders and educators. P. Michael Timpane and Laurie Miller McNeill note in *Business Impact on Education and Child Development Reform: A Study Prepared for the Committee for Economic Development* that some business leaders are concerned about education's capacity and willingness to change. Some educators, in turn, fear that business does not understand educational problems, has unrealistic expectations, or will use the schools for "narrow promotional or vocational purposes."

Such tensions related to curriculum and instruction will continue to be explored as education and business groups work together to arrive at common interests and mutual understanding.

Higher Education's K–12 Partnerships

The higher education community is active in collaborating with elementary and secondary schools to strengthen teaching and learning and to increase access to postsecondary education.

Concurrent enrollment programs enable students to enroll in college-level courses before they graduate from high school. Examples include the College Board's Advanced Placement Program and Minnesota's Postsecondary Enrollment Options Program.

Enrichment, compensatory, and motivational partnerships enhance the secondary school experience; help students develop skills; or provide inspiration, motivation, and support for students who otherwise might not seriously consider the college option. One model program is University of California–Berkeley's Mathematics, Engineering, Science Achievement program for minority high school students.

Academic alliances and other teacher-to-teacher partnerships enable classroom teachers and college faculty to work together in an academic discipline to strengthen teaching and learning. Examples include the Greater Boston Foreign Language Collaborative and the National Writing Project.

Other forms of higher education collaboration with K–12 programs include *preservice teacher education partnerships* and *professional development schools* that involve teacher educators and practitioners in the preparation of new teachers, and *tutoring and mentoring programs* that pair college students with at-risk students.

Finally, *partnerships for school improvement or restructuring* have a more comprehensive focus, the betterment of an entire school or system. One example is the EQ Models Program for School-College Collaboration, a component of the College Board's Educational EQuality (EQ) project to improve the quality of secondary education and increase access to postsecondary education.

For more information, see *College Partnerships: Conceptual Models, Programs, and Issues* (1991), by Arthur R. Greenberg, ASHE–ERIC Higher Education Report No. 5. The report is available for $17 from the ERIC Clearinghouse on Higher Education, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036–1183; (202) 296–2597.

THE ERIC Review

Higher Education-Business Partnerships: Development of Critical Relationships

by Diane Hirshberg

The U.S. business community is striving to adapt to a number of changing economic realities, including:

- A shift in economic structure from a manufacturing base to a postindustrial base of service, information, and technology.
- International competition that has eroded American jobs and profits.
- A growing trade deficit that is undercutting the U.S. position in the world economy.
- A decline in productivity growth. Currently it takes 3 years to gain the same level of productivity increase that was gained in only 1 year prior to 1973 (Gonzales, 1991).

Coupled with these economic changes are changes in the work force that intensify the need for worker training and retraining. By the year 2000, 85 percent of all new workers will be women, minorities, and recent immigrants (Thomas-Wilson-Robertson and Zeiss, 1991). If present rates continue, 15 to 20 percent of the high school students now enrolled will drop out of school before graduation, and they will lack the skills needed to succeed in the workplace. Furthermore, every fifth person now hired in American industry is functionally and mathematically illiterate (Mancuso Edwards, 1990). Nationwide, private industry spends more than $30 billion to train and retrain its work force; an estimated 75 percent of American workers will need retraining by the year 2000 to meet the changing demands of the workplace, including new technology and management structures (Mancuso Edwards, 1990; Thomas-Wilson-Robertson and Zeiss, 1991).

U.S. business leaders, as well as federal and state policymakers, see the education community as a critical component in increasing American economic competitiveness. As a result, they have taken the lead in education reform activities over the past decade. Their involvement spans K–12 (see page 6) to postsecondary levels. Companies seeking to expand their research and development activities, implement work force retraining, or gain access to new technologies are turning increasingly to higher education institutions, from major research universities to community colleges.

This article provides an overview of partnerships between business and higher education.

Higher Education in Support of the Business Community

The importance of the role played by higher education institutions in supporting business and industry cannot be overstated. First and foremost, colleges and universities provide industry with trained personnel—from technicians and managers to research and development personnel. Beyond this, universities provide technical expertise and current scientific and technological information to industry. Under the rubric "technology transfer," they assist businesses in applying research results and provide advice on how to operate more effectively (Fairweather, 1989). In addition, higher education provides retraining services that keep work forces up to date. Although large corporations have traditionally maintained their own human resource development programs, smaller businesses and even some large corporations are finding it financially more feasible to contract with educational institutions to conduct training (Pincus, 1985).

Colleges and universities, as well as businesses, stand to benefit from such partnerships. In the mid-1980s, colleges and universities faced a decline in student enrollments, funding difficulties, and increasing obsolescence in their research equipment and facilities (Allen, Aldridge, and Burkhalter, 1989). Partnerships and contracts with industry have provided funding for research activities and equipment purchases that otherwise might not have been possible (Fairweather, 1989). In addition, these relationships often give faculty the opportunity to apply their expertise to real-world problems.

The roles education organizations play in supporting business often vary by type of institution. Research universi-

Diane Hirshberg was formerly the User Services Coordinator for the ERIC Clearinghouse for Junior Colleges.

ties tend to receive the majority of their industry funding for research. Comprehensive 4-year colleges and universities contribute to regional economic development, focusing on companies located close to campus and local and regional educational and economic needs. Community colleges typically make their contributions to local and regional economic development through job training and retraining programs as well as business consulting. These delineations are approximate, however; many research universities participate in job training programs, some community colleges conduct industry-related research, and all levels of higher education organizations participate in technical transfer activities (Fairweather, 1990).

University-Business Partnerships

Affiliations between universities and the private sector began to grow at the end of the 1970s, when federal funding for university research leveled off. Over the years, industry funding to colleges and universities for research and development has increased substantially. As the source of research funding shifted, so did the nature of the academic research conducted. While government-funded studies typically fall in the category of "basic research," the private sector more often funds "applied research," with practical applications in such areas as engineering, medicine, computer science, chemistry, and biotechnology. University-business relationships are particularly strong in biotechnology; nearly half the companies in this field have some sort of arrangement with a university, underwriting between 16 and 24 percent of all university funding in this discipline (Fairweather, 1990).

Universities conduct many other types of business partnerships, including industrial incubators designed to develop new companies, not-for-profit and for-profit joint research ventures, and industrial affiliate programs, in which corporations can pay for access to faculty research findings (Fairweather, 1990). Stanford University; University of California, Berkeley; and Massachusetts Institute of Technology are among the major universities providing technology transfer services, including patent policy and administration, industrial liaison programs, continuing education, and university ownership of equity in research-based companies (Matkin, 1990). The three case studies that follow are examples of other innovative partnerships between industry and universities.

■ ***New field of study develops with the help of IBM funding.*** In 1982, the IBM Corporation sponsored a $50 million grant competition to support new approaches in manufacturing. Subsequently, 22 universities received Computer-Aided Drafting/Computer-Aided Manufacturing (CAD/CAM) equipment, and 5 of them also received $2 million in curriculum grants for manufacturing systems engineering (MSE) programs. IBM provided technical staff and consultants to assist in program development. By providing funding, equipment, and technical expertise, IBM essentially legitimated MSE as a field of graduate study. In 1981, only 1 American university offered an MSE program; more than 50 institutions offer MSE degrees today.

This partnership program has had positive results for all involved. Graduates of MSE programs have reported substantial success in the workplace. Universities have benefited by acquiring state-of-the-art equipment for their programs and up-to-date training on manufacturing processes from IBM. IBM and other companies benefit by being able to hire engineers with the training and knowledge needed to move the manufacturing industry forward.

IBM is continuing its involvement in higher education, extending its participation to community colleges as well. In 1989, IBM began an education partnership program intended to establish computer-integrated manufacturing facilities in 48 2-year and 4-year institutions (Porter, 1989).

■ ***Purdue's technology transfer supports economic development in Indiana.*** In May 1986, Purdue University established the Technical Assistance Program (TAP) for small- and medium-size businesses and industry in Indiana, with the goal of eventually improving economic conditions throughout the state. TAP uses the human and technical resources of the university to assist firms in implementing advanced technologies. Senior research faculty and graduate students conduct all the project work, thus applying their research in real-life contexts. Clients in turn are guaranteed access to the newest and most advanced technologies at no cost. As of September 1988, TAP had worked with more than 450 companies in Indiana, more than 90 percent of which reported that they were pleased with the results of the program and were adopting TAP recommendations or using the information provided by TAP (Law and others, 1989).

■ ***University of California program keeps telecommunications employees current.*** In 1984, the University of California Extension, the noncredit and continuing education arm of the University of California system, responded to a request by Pacific Bell to develop a technical training program that would provide the company's telecommunications engineers with updates on current technology and prepare them for future developments in telecommunications. Access to the program has been extended to other telecommunications companies in California: at IBM–Rolm, 2,100 employees are now enrolled in an in-plant version of the program (Tsina and others, 1989).

Community Colleges and the Business Community

In the last 15 years, community colleges have taken a leading role in local business and economic development activities, providing customized job training and small-business assistance and development programs, as well as continuing their traditional role of producing a trained labor force (Palmer, 1990). A recent survey of 16 leading community college systems demonstrates the growth of participation in economic development activities. In the 1980–1981 academic year, the colleges operated a total of 132 customized training programs; 6 years later they ran 1,700 programs. The volume of these programs increased from $200,000 to $13 million (Kent, 1991).

Throughout the 1980s, community colleges across the country began

creating advanced technology centers (ATCs) to improve their ability to meet the needs of industry and business. ATCs promote technology transfer by identifying and then helping local employers learn about technological innovations that are applicable to their businesses. In addition to serving as demonstration sites for relevant processes and equipment, ATCs offer work force training and consulting (Smith, 1991).

The following case studies demonstrate the range of community college-business partnerships possible:

■ ***Special Schools attract industry to South Carolina.*** While many community colleges are involved in one-on-one partnerships with local businesses, others are part of consortia or statewide programs designed to offer services to a multitude of businesses.

For 30 years, South Carolina's Special Schools have provided pre-employment training programs to assist new and expanding industries as they begin operations in the state. The Special Schools program, created by the South Carolina State Board for Technical and Comprehensive Education (State Tech Board) in 1961, is essentially a state-funded partnership involving South Carolina's 16 technical colleges, new or expanding companies, and other state agencies.

Each of the Special Schools is developed in cooperation with the company being served. The school operates as a temporary entity created from the resources of the consortium to provide the training needed in each case. It plans the curriculum according to the jobs being created, and assists the company in recruiting and screening job candidates. The school then provides classroom or on-site training and also offers special training programs for supervisors or future job trainers.

The program has provided services to more than 1,000 plants, training more than 120,000 workers in the process (Brooks, 1990).

■ ***California system gains strength through networking.*** The California community college system's resources have been pooled in the 107-member Economic Development Network (ED>NET), creating a $3 billion resource for the state's business and industry community. Founded in 1989, ED>NET already has developed a statewide program providing total quality management (TQM) training to hundreds of suppliers to the state's aerospace contractors, a program expected to generate training revenues of more than $40 million by the end of 1992.

ED>NET also has developed a project with Pacific Bell that is providing accelerated associate in arts programs to 2,800 employees at 19 community colleges statewide. ED>NET has made it easy for businesses to access the resources of California's community colleges by developing an information clearinghouse with a toll-free number. Callers receive referrals to college services, including economic development and training programs, available throughout the state (Kent, 1991).

■ ***Great Lakes region supports area businesses through consortium.*** The Mid-America Training Group (MATG) was established in 1984 by the presidents of 15 community and technical colleges in 7 Great Lakes states (Illinois, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin). MATG provides local industry with training capabilities and technology-transfer programs that are not limited by what is available through local colleges. Member colleges pool resources and expertise, offering clients more than $250 million worth of personnel, facilities, and equipment as well as more than 250 years of collective training experience. General Motors, IBM, and Firestone, among others, have taken advantage of MATG services for training and retraining employees.

The program has benefits for the participating colleges as well as for industry: colleges enjoy cooperative marketing efforts, improved training capabilities, interinstitutional support, and shared tools for program development and evaluation (Schubert, 1989).

■ ***Colorado initiative reduces employee turnover.*** Employee turnover is a major concern for businesses nationwide. In Colorado, a recent study found that 43 percent of the employers surveyed experience problems in retaining workers in critical job areas. In response, Pueblo Community College (PCC) has developed an employee retention initiative model that has proved effective in reducing the turnover rate for the Wats Marketing Group, a telemarketing subsidiary of American Express. The field of telemarketing typically has a high turnover rate—in some cases as high as 300 percent annually for sales representatives. However, when PCC trained 500 telemarketing professionals for Wats Marketing, including the entire management staff, the attrition rate after 3 months was only 2.5 percent. The retention model includes a company-specific study, job assessment profiles, basic skills and job skills training, worker motivation activities, and customized management training (Zeiss, 1990).

Higher Education and Business Provide Faculty Development

In addition to enhancing economic productivity, college-business partnerships can provide faculty development opportunities. A unique partnership among General Motors (GM), United Auto Workers (UAW), and the Michigan State Board of Education focuses on preparing trade and industrial education faculty at secondary and postsecondary institutions. Funded by GM and the Michigan State Board of Education, the UAW-GM Vocational-Technical Mentorship Program was developed to provide these instructors with training in up-to-date skills and technology used in GM manufacturing. Program participants spend 9 weeks at a GM facility, where they "shadow" technicians working on the shop floor. They observe and experience the industrial applications of current technology, attend GM training courses, and complete a project entailing development of new training classes for GM employees. Finally, the teachers bring back to their classrooms new knowledge and teaching ideas that will benefit their students and the future employers of these students, including GM (Atkins, 1990).

Where To Go for More Help

The following organizations are among the sources for additional information on higher education-business partnerships. See also the Resource List starting on page 13.

American Association for Community and Junior Colleges
Educational Services
One Dupont Circle NW, Suite 410
Washington, DC 20036
(202) 728–0200

Companies or colleges interested in forming collaborative relationships may phone Lynn Barnett or Jim McKenney for technical assistance in identifying matches and starting up.

ED>NET
California Community Colleges
Economic Development Network
1805 North Fine Street, Suite 106
Fresno, CA 93727
1–800–344–3812
(209) 255–9077

State community college systems interested in pooling their resources for business and industry support may contact ED>NET for ideas on establishing such a network.

Labor/Higher Education Council
3429 34th Place NW
Washington, DC 20016
(202) 362–1522

The Labor/Higher Education Council, sponsored by the American Council on Education and the AFL–CIO, works to promote collaboration between colleges and universities and the labor movement on issues of concern to both sectors, particularly worker training. Contact Len Oliver, Executive Director, for additional information.

The Tennessee Valley Authority (TVA)
Community College Network
1C40 Old City Hall
601 West Summit Hill Drive
Knoxville, TN 37902
(615) 632–8103

The TVA Community College Network recently launched a regional initiative involving 40 community colleges and area businesses and community organizations. Groups interested in similar regional initiatives may call or write Mr. Carroll Marsalis.

Questions Regarding Business-Higher Education Partnerships

Business-higher education partnerships offer many benefits: state-of-the-art technology and information transfer, improved efficiencies in staff development and training, and economic and community development. Linkages between institutions of higher education and business help ensure that students are prepared for the demands of the workplace and that the workplace can take advantage of cutting-edge research and development.

Some researchers have concerns, however, about the nature and effects of these relationships on educational institutions. They question whether such partnerships have detrimental effects on the quality of academic instruction in research and comprehensive universities and whether the relationships compromise the independence of educational institutions in controlling their own curriculum.

Fairweather (1989) asserts that "academic liaisons with industry may . . . detract from the instructional mission of the university, particularly undergraduate teaching" (p. 396). He further notes that business-university partnerships, which often encourage applied research activities, may detract from the basic research mission of universities.

Pincus (1985) also cautions that corporations and colleges do not always share the same goals and interests. In particular, he is concerned that businesses have far narrower goals for training workers than do colleges, whose mission includes the teaching of both concrete skills and abstract academic subjects such as philosophy and values. Pincus fears that liberal arts programs will be greatly weakened or even disappear from community colleges as vocational programs continue to grow, and that community college leaders will focus attention more on the needs of business than on the academic needs of students.

On the other hand, many researchers are now arguing in favor of considering applied research a legitimate academic undertaking (Allen, Aldridge, and Burkhalter, 1989). Faculty understanding of applications of technology can improve the quality of their teaching and ultimately strengthen the preparation of students. Resources from the business community can enhance educational offerings and help equip students for productive work *and* personal lives. Finally, business-higher education collaborations can harness the strengths of both communities to better serve the needs of society.

Conclusion

As the United States attempts to regain its economic preeminence in the world, partnerships between institutions of higher education and the business community will continue to grow. Higher education-business partnerships already have contributed to improving industry's understanding of technology, the quality of the work force, and the education community's knowledge of the workplace. New and changing technologies create a continual need for retraining workers, development of new applications for technology, and innovations in how industry conducts its business. Institutions of higher education have moved to the forefront of the struggle to keep American business competitive and will remain there as we enter the next century.

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Catalytic Organizations: A Means for Encouraging Higher Education-Business Partnerships

Partnerships between higher education institutions and businesses can be developed on a one-on-one basis. However, as Powers and Powers (1989) point out, these individual relationships may prevent educators from conducting broad-scale studies to identify emerging regional needs and also discourage programs that respond to needs beyond those of the one particular company. To avoid such problems, local, regional, state, and national organizations should be created to serve as catalysts for higher education-business partnerships. The impetus for creation of these organizations can come from higher education institutions or government agencies.

The following recommendations on how to create and run catalytic organizations successfully were developed by directors of existing organizations designed to encourage partnerships:

Getting Started

- Choose representatives of comparable levels of seniority from business and higher education. Obtain backing from chief executive officers and involve committed and effective participants.
- Set clearly defined objectives consistent with the needs of business and higher education and the particular representatives of each sector.
- Appoint task forces to deal with specific issues.
- Acquire enough funding to give the organization a fair chance to succeed.
- Make sure projects are feasible in terms of budget and staff required.
- Establish a "home" for the catalytic organization—in either the business or higher education community—that is willing to take criticism and defend the efforts of the group.
- Be patient—it takes time to build trust among members and identify appropriate issues that can be addressed productively.

Building Together

- Consult with experts to define business needs, design and implement programs, and establish procedures that will enable the partnership to operate effectively.
- Develop programs that can be customized to meet the needs of individual employers.
- Identify methods for screening program participants, assessing their performance, and helping them transfer, where necessary, into remedial basic skills courses.
- Organize strong program advisory committees.
- Build in opportunities for feedback.
- Remain flexible, open-minded, and willing to experiment and take risks to find out what works.

(Adapted from "Creating Catalytic Organizations" by Mary F. Powers and David R. Powers in *Adult Learning*, October 1989, Volume 1, Issue 2, pp. 18–20.)

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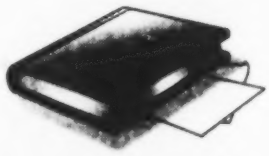


Recent Federal Partnership Initiatives

The U.S. Department of Education is committed to encouraging businesses and communities to collaborate with schools to improve education. The Corporate Liaison Office within the Department provides outreach to businesses and groups such as chambers of commerce to encourage them to help their communities reach the National Education Goals and get involved in AMERICA 2000.

Starting in 1990, the Department's Office of Educational Research and Improvement (OERI) began awarding grants under its Educational Partnerships Program. These grants, awarded to partnerships involving public elementary and secondary schools, institutions of higher education (IHEs), businesses, and nonprofit organizations, are used to help elementary and secondary schools and IHEs obtain and use community resources to encourage excellence in education, work effectively with educationally disadvantaged and gifted students, and expose students to jobs and career possibilities.

This year (FY 92), $4.23 million has been allocated to create up to five new educational partnerships that focus on "Fundamental Educational Improvement Through the Strategy of Systemic Change"; examples of systemic change include effective schools initiatives, choice options, and school restructuring. Approximately four additional projects in this priority area will be funded out of FY 1993 funds. Each partnership will undergo a rigorous evaluation to determine its impact, potential for replication, and contribution to the body of knowledge about effective partnerships for educational improvement. Information about successful practices will be widely disseminated.

To encourage partnerships between institutions of higher education and secondary schools serving low-income and at-risk students and to improve these students' academic skills, thereby increasing their access to postsecondary education and employment, the U.S. Department of Education has developed the School, College, and University Partnerships (SCUP) program. Administered by the Division of Student Services within the Office of Postsecondary Education, the SCUP program supports such activities as tutoring, study skills and test-taking instruction, college and career counseling, and enrichment activities. Fourteen projects were awarded 3-year grants totaling $3.9 million in fiscal year 1991; a competition for new grant awards under this program is not planned for fiscal year 1992.

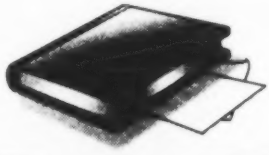
In the area of work force preparation, the Office of Vocational and Adult Education's Division of National Programs funds the National Workplace Literacy Partnership Program. Support is provided to demonstrate that job-related programs of literacy and basic skills can result in new employment, advancement, and increased productivity. To be eligible, partnerships must include at least one representative from business, industry, a labor organization, or a private industry council and another from a state or local education agency, an institution of vocational or higher education, an employment and training agency, or a community-based organization.

The U.S. Department of Labor (DOL), like the U.S. Department of Education, has launched collaborative efforts to keep young people in school and increase their preparedness for the workplace. The Labor Secretary's Commission on Achieving Necessary Skills (SCANS) has identified a three-part foundation of basic skills, thinking skills, and personal qualities students need to develop along with five generic workplace competencies: using resources, using information, using interpersonal skills, using systems, and using technology. DOL has established a Youth Mentors Office to aid employers interested in supporting education through mentoring.

In September 1990, the Department of Labor presented LIFT (Labor Investing for Tomorrow) Awards to 16 organizations in 4 categories, including Business-School Partnerships and School-to-Work Programs. DOL's Office of Work-Based Learning offers assistance in the establishment of youth appprenticeship programs; the Job Training Partnerships Act (JTPA) and Job Corps programs are other DOL programs that aid youth in the transition to the work force.

Other federal partnership initiatives focus largely on one academic area. For example, the U.S. Department of Energy's partnership program pairs federal research laboratories and schools to improve science and math education. The National Endowment for the Arts' Arts Plus program provides funding to arts organizations that make a 3-year commitment to a school or school district to make the arts a basic element of prekindergarten through grade 12 education.

Contact information for the federal partnership initiatives described here are included in the list of resource organizations starting on page 13.



Organizations and Associations

American Association of Higher Education (AAHE)
AAHE is a membership organization that works to identify and resolve critical issues in postsecondary education through conferences, publications, and special projects. AAHE's Office of School-College Relations can provide information and referrals on collaborations for educational improvement. One Dupont Circle NW, Suite 600, Washington, DC 20036–1110; (202) 293–6440.

Association of School/Business Partnership Directors
This professional association provides directors of school district partnership programs with opportunities for networking and professional growth. Members may be employed by a school system or an outside agency, such as a chamber of commerce. The association sponsors workshops and enables members to use a resource bank in Pittsburgh to obtain such materials as professional articles, training modules, evaluation tools, and data on exemplary programs. P.O. Box 923, Norwalk, CT 06852.

Business Council for Effective Literacy (BCEL)
A membership organization for businesses interested in literacy issues, BCEL produces a newsletter and other publications. Businesses interested in receiving a brochure, *Functional Illiteracy Hurts Business*, and one complimentary copy of the newsletter should write to BCEL on company letterhead. 1221 Avenue of the Americas, New York, NY 10020; (212) 512–2415/2412.

Business-Higher Education Forum
This membership organization, founded in 1978 by the American Council on Education, is composed of 90 academic and corporate chief executives who meet to address issues of mutual concern to the corporate and higher education communities and to build consensus on how the two sectors can collaborate more effectively for the benefit of all. The Business-Higher Education Forum conducts roundtables, publishes policy reports, and awards the Anderson Medal to exemplary business-higher education partnerships across the country. One Dupont Circle NW, Suite 800, Washington, DC 20036; (202) 939–9345.

Business Roundtable
Chief executive officers of major U.S. corporations comprise this public affairs organization representing American business. The Education Committee of the Human Resources Task Force oversees members' activities with schools, including career awareness, civic and character education, and drug and dropout prevention efforts. 200 Park Avenue, Suite 2222, New York, NY 10166; (212) 682–6370.

Center for Human Resources Clearinghouse
This center studies the relationship between social equity, social protection policies, and productivity and provides information on youth employment and education, dropout prevention, and school reform. Brandeis University, Heller Graduate School, 60 Turner Street, Box 9110, Waltham, MA 02254–9110; 1–800–343–4705.

Center for Workforce Preparation and Quality Education
Established by the U.S. Chamber of Commerce in 1990, the center serves as a clearinghouse for local chambers of commerce and business communities interested in improving and reforming education. Write for a publications list. 1615 H Street NW, Washington, DC 20062–2000; (202) 463–5525.

Committee for Economic Development (CED)
CED, an independent research and education organization, is composed of more than 200 business leaders and educators. Its objective is to promote stable growth with rising living standards and increase opportunities for all. Among CED's chief interests are education reform and child development. 477 Madison Avenue, New York, NY 10022; (212) 688–2063 and 1700 K Street NW, Washington, DC 20006; (202) 296–5860.

Council for Aid to Education
This organization seeks to increase the amount and effectiveness of education funding contributed by the private sector. The Council for Aid to Education conducts research on education philanthropy and offers training and publications on issues in higher and precollege education. 51 Madison Avenue, Suite 2200, New York, NY 10010; (212) 689–2400.

Cities in Schools, Inc.
Sponsored by the U.S. Departments of Justice, Health and Human Services, Labor, and Commerce, this organization seeks to create public-private partnerships to bring existing human resource services into schools where they can benefit youth at risk of dropping out. Cities in Schools offers factsheets, brochures, newsletters, and training manuals. 401 Wythe Street, Suite 200, Alexandria, VA 22314; (703) 519–8999.

InfoMedia, Inc.
This publisher specializes in newsletters, journals, books, and directories on business-education partnerships and sponsors a national partnership awards competition. Call or write for a sample issue of *Business-Education Report*, *Business-Higher Education Report*, or *Partnerships in Education Journal*. P.O. Box 210, Ellenton, FL 34222–0210; (813) 776–2535.

Inroads, Inc.
This organization assists U.S. corporations that sponsor internships for minority students and prepares African-American, Hispanic, and Native American high school and college students for leadership positions within major business corporations in their own communities. Inroads offers training, publications, and a speaker bureau. 1221 Locust Street, Suite 300, St. Louis, MO 63103; (314) 241–7488.

Institute for Educational Leadership (IEL)
IEL conducts extensive analysis of education policies and provides leadership development for educators and policymakers. IEL operates the Work/Educational Fellowship Program, which helps school staff in urban areas better prepare students for the transition from school to work. 1001 Connecticut Avenue NW, Suite 310, Washington, DC 20036; (202) 822–8405.

Institute on Education and the Economy
This institute conducts research and policy analysis to assess the impact of changes in the economy and job markets on all levels of the education system. It publishes reports and papers that address such topics as teacher education and job skills training. Teachers College, Columbia University, Box 174, New York, NY 10027; (212) 678–3091.

National Alliance of Business (NAB)
Through its Center for Excellence in Education, NAB works with businesses, federal agencies, state and local government, and community-based groups to promote the restructuring of education. Write to request a free copy of the executive summary of "Corporate Action Agenda: The Business of Improving Public Education." 1201 New York Avenue NW, Suite 700, Washington, DC 20005; (202) 289–2910.

National Association for Industry-Education Cooperation (NAIEC)
NAIEC advocates industry-education collaboration in school improvement, preparation for work through career education, and human resource and economic development. The association provides technical assistance in establishing formally structured industry-education councils composed of leaders in business, education, labor, government, and the professions. 235 Hendricks Boulevard, Buffalo, NY 14226–3304; (716) 834–7047.

National Association of Partners in Education (NAPE)
NAPE is a membership organization representing schools, businesses, community groups, educators, and individuals who work together as partners to enhance the education of children. Materials and training for school-business-community relationships and volunteer and partnership initiatives are available. 209 Madison Street, Suite 401, Alexandria, VA 22314; (703) 836–4880.

National Center for Research in Vocational Education
This organization provides vocational education information to the public and private sectors, including online searches and a free newsletter and product catalog. Its research agenda includes the following areas: context, goals, planning, and evaluation; curriculum and instructional methods; vocational education for special populations; the development of personnel in vocational education; the delivery system of vocational education and training; and governance and policy. 1995 University Avenue, Suite 375, Berkeley, CA 94704–1058; 1–800–762–4093.

National Center on Education and the Economy
This organization was created to develop proposals for building the world-class education and training system the United States must have if it is to have a world-class economy. The center conducts policy analysis and development and works collaboratively with others at the local, state, and national levels. 39 State Street, Suite 500, Rochester, NY 14610; (716) 546–6720.

National Committee for Citizens in Education (NCCE)
NCCE promotes citizen and parent involvement in local public school issues through a program of research, publication, and information dissemination. Its special interest is in legal issues related to parent and student rights. Bilingual services are provided to Spanish-speaking requesters. 900 Second Street NE, Suite 8, Washington, DC 20002–3557; 1–800–NET–WORK.

National Community Education Association (NCEA)
Founded in 1966, NCEA promotes and supports community involvement in public education, interagency partnerships, and lifelong learning opportunities for everyone in the community. The association publishes a journal, a newsletter, and other training materials and also provides technical assistance to communities. 801 North Fairfax Street, Suite 209, Alexandria, VA 22314; (703) 683–6232.

National Dropout Prevention Center
This center seeks to reduce the nation's dropout rate by fostering public-private partnerships in local school districts and communities across the country. It collects, analyzes, and disseminates information about such partnerships; provides technical assistance to develop and demonstrate dropout prevention programs; and maintains an online database of dropout prevention information called FOCUS. Clemson University, Clemson, SC 29634–5111; 1–800–443–6392.

National Information Center on School-College Partnerships
This information center maintains a computerized database on school-college partnerships across the nation. Faculty and administrators at schools and colleges may conduct customized searches by discipline, region, or program type. Syracuse University, 111 Waverly Avenue, Suite 200, Syracuse, NY 13244–2320; (315) 443–2404.

National Mentor Network
Developed by the National Media Outreach Center with support from the U.S. Department of Labor, the National Mentor Network helps refer business volunteers interested in mentoring to schools in their area. Write or call for the names of contacts in your area and a list of print and video resources on mentoring. 4802 Fifth Avenue, Pittsburgh, PA 15213; (412) 622–1584/1491.

National Research Center on the Educational Quality of the Workforce
This university-based research center conducts basic and applied research on the education requirements of occupational clusters to determine the short- and long-term effects of school and college achievement on labor-market outcomes and disseminates information to educators and businesses. 4200 Pine Street, Room 5A, Philadelphia, PA 19104–4090; (215) 898–4585.

National Youth Employment Coalition
To increase employment and training opportunities for disadvantaged youth, this organization encourages information exchange between community-based organizations and corporations. It offers factsheets, a bimonthly newsletter, directories, and reports relating to youth employment and training issues. 1501 Broadway, Suite 1111, New York, NY 10036; (212) 840–1834.

Public/Private Ventures (P/PV)
Designs, manages, and evaluates social policy initiatives to help young people, especially those who are hard to serve, become productively employed and self-sufficient. P/PV works with schools, employment and training organizations, community-based organizations, foundations, business, and government to improve education, training, and employment. 399 Market Street, Philadelphia, PA 19106–2178; (215) 592–9099.

Southwest Regional Laboratory (SWRL)
One of 10 regional educational laboratories sponsored by the U.S. Department of Education's Office of Educational Research and Improvement (OERI). SWRL is responsible for documenting and evaluating projects funded through OERI's Educational Partnerships Program. 4665 Lampson Avenue, Los Alamitos, California 90720; (310) 598–7661.

Volunteer: National Center for Citizen Involvement
This membership organization encourages the exchange of ideas and information among volunteer program leaders through publications, training, and reference and information services. 1111 North 19th Street, Arlington, VA 22209; (703) 276–0542.

Clearinghouses

ERIC Clearinghouse on Adult, Career, and Vocational Education
Ohio State University
1900 Kenny Road
Columbus, OH 43210–1090
1–800–848–4815

ERIC Clearinghouse on Educational Management
University of Oregon
1787 Agate Street
Eugene, OR 97403
(503) 346–5043

ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, IL 61801–4897
(217) 333–1386

ERIC Clearinghouse on Higher Education
The George Washington University
One Dupont Circle NW, Suite 630
Washington, DC 20036–1183
(202) 296–2597

ERIC Clearinghouse for Junior Colleges
University of California at Los Angeles
Math-Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, CA 90024–1564
(310) 825–3931

ERIC Clearinghouse on Rural Education and Small Schools
Appalachia Educational Laboratory
1031 Quarrier Street
P.O. Box 1348
Charleston, WV 25325–1348
1–800–624–9120

ERIC Clearinghouse on Teacher Education
American Association of Colleges for Teacher Education
One Dupont Circle NW, Suite 610
Washington, DC 20036–2412
(202) 293–2450

ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Main Hall, Room 303, Box 40
525 West 120th Street
New York, NY 10027–9998
(212) 678–3433

Federal Agencies

U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202

Office of the Deputy Secretary

- Corporate Liaison
  (202) 401–3060
- AMERICA 2000
  1–800–USA–LEARN

Office of Educational Research and Improvement

- Educational Partnerships Program
  (202) 219–2116

Office of Postsecondary Education

- National Workplace Literacy Partnership Program
  (202) 732–5950
- School, College, and University Partnerships Program
  (202) 708–4804

U.S. Department of Labor
200 Constitution Avenue NW
Washington, DC 20210

- Job Corps
  (202) 535–0550
- Job Training Partnerships Act
  (202) 535–0580
- School-to-Work Transition Programs
  (202) 523–0281
- Secretary's Commission on Achieving Necessary Skills
  1–800–788–SKILL
- Youth Mentors Initiative
  (202) 535–8758

U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

- Partnership Programs
  (202) 586–8951

National Endowment for the Arts
Arts in Education Program
1100 Pennsylvania Avenue, Room 602
Washington, DC 20506

- Arts Plus
  (202) 682–5426

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General Reading List

The following titles cover a range of issues regarding education-community-business partnerships. Ordering information is included at the end of each entry. In addition, publications with an ED number have been abstracted and are in the ERIC database. You may read them on microfiche at more than 3,000 locations worldwide or order microfiche or paper copies from the ERIC Document Reproduction Service at 1–800–443–ERIC (3742). For details, contact ACCESS ERIC at 1–800–LET–ERIC (538–3742).

At-Risk Youth in Crisis: A Handbook for Collaboration Between Schools and Social Services
Linn-Benton Education Service District and the ERIC Clearinghouse on Educational Management, 1991
(See ERIC document numbers in text below.)

This handbook series promotes interagency agreement on procedures for schools to follow in managing crisis situations with at-risk students. *Volume 1: Introduction and Resources* (ED 330 025) helps school districts adapt the handbook for their own needs and provides resources on school-social service agency collaboration. Subsequent volumes provide practical materials for dealing with suicide (*Volume 2*, ED 330 026), child abuse (*Volume 3*, ED 332 307), substance abuse (*Volume 4*, ED 332 308), and attendance (*Volume 5*). ($7.50 per volume; series discount available) ERIC Clearinghouse on Educational Management, University of Oregon, 1787 Agate Street, Eugene, OR 97403–5207; (503) 346–5044.

A Blueprint for Business on Restructuring Education
National Alliance of Business, 1989
ED 312 486

This report (R3844) discusses how business people can use their experience and expertise to bring about systemic educational change. Recommendations address school-based management, teacher and administrator professionalism, curriculum revision, accountability measures, and links between education and social services. ($15) National Alliance of Business, 1201 New York Avenue NW, Suite 700, Washington, DC 20005; (202) 289–2910.

Briefs on Mentoring
Erwin Flaxman and Charles Harrington, 1992

These issue briefs for educators, policymakers, and the general public address mentoring relationships and practices. (Free) To order, send a stamped (48 cents) self-addressed envelope to Briefs on Mentoring, Box 40, Teachers College, Columbia University, New York, NY 10027.

Bring Business and Community Resources Into Your Classroom: A Handbook for Educators
National Education Association, 1991

This manual for teachers and administrators (#1851–6–00) provides practical advice about seeking and using business and community resources for instruction and learning. It includes 18 case studies and sample surveys, letters, and forms. ($19.95) NEA Professional Library, Box 509, West Haven, CT 06516; 1–800–229–4200.

Business and the Schools: A Guide to Effective Programs
Diana Wyllie Rigden, 1992

This volume describes what businesses can do to support elementary and secondary education. The projects profiled address changing the nature of schooling, changing teaching and learning strategies, and changing the relationship between schools and the community. ($20) Council for Aid to Education, 51 Madison Avenue, Suite 2200, New York, NY 10010; (212) 689–2400.

Business Impact on Education and Child Development Reform
P. Michael Timpane and Laurie Miller McNeill, 1991
ED 337 514

This research report provides a critical look at the involvement of corporate America in the reform of public education. It traces the evolution of the business role from "helping hand" to more substantive participation in leading coalitions for reform and initiating policy change at the state and national levels. It offers an agenda for the 1990s. ($11) Committee for Economic Development, 477 Madison Avenue, New York, NY 10022; (212) 688–2063.

Business/School Partnerships: A Path to Effective School Restructuring
Diana W. Rigden, 1991
ED 336 813

This book offers guidelines and models for companies interested in establishing partnerships with schools that lead to restructuring outcomes. It covers goal setting, costs, management, and assessment issues. ($15) Publications Department, Council for Aid to Education, 51 Madison Avenue, Suite 2200, New York, NY 10010; (212) 689–2400.

Business Strategies That Work: A Planning Guide for Education Restructuring
National Alliance of Business, 1990
ED 322 329

This publication (R3894) illustrates how small and large corporations can work collaboratively within broad community coalitions and their own companies to create educational change. ($15) National Alliance of Business, 1201 New York Avenue NW, Suite 700, Washington, DC 20005; (202) 289–2910.

Collaboration Between Schools and Social Services
Lynn Balster Liontos, 1990
ED 320 197

This ERIC Digest (EA 48) outlines the need for collaboration between education and human service agencies, offers startup suggestions, and identifies successful efforts. ($2.50) ERIC Clearinghouse on Educational Management, University of Oregon, 1787 Agate Street, Eugene, OR 97403–5207; (503) 346–5044.

Collaboration To Build Competence: The Urban Superintendents' Perspective
Terry A. Clark, 1991

This report from the Office of Educational Research and Improvement's Urban Superintendents' Network offers strategies for developing comprehensive collaborations among schools, community agencies, and businesses to serve the needs of children. Profiles of selected urban partnerships are offered. ($4) New Orders, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250–7954.

***Economic and Work Force Development New Directions for Community Colleges*, 1991**
ED 335 107

This issue of *New Directions for Community Colleges* (#75) focuses on the task of meeting the economic and work force development needs of local communities within a global economy. Trends, innovations, problems, and solutions are addressed by various contributors. ($15.95) Jossey-Bass Inc., Publishers, 350 Sansome Street, San Francisco, CA 94104; (415) 433–1767.

Educational Partnerships Program: Analysis of Project Characteristics
Jacqueline P. Danzberger, 1990
ED 325 534

This report, commissioned by the U.S. Department of Education, presents a descriptive analysis of 18 partnership projects funded by the Office of Educational Research and Improvement's Educational Partnerships Program. ($16 plus postage) ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153–2852; 1–800–443–ERIC (3742).

Employability—The Fifth Basic Skill
Bettina A. Lankard, 1990
ED 325 659

This ERIC Digest (#104) discusses employability as a basic skill and introduces strategies for incorporating this skill into academic and vocational instruction. (Free) ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University, 1900 Kenny Road, Columbus, OH 43210–1090; 1–800–848–4815.

Excellence at Work: Policy Option Papers for the National Governors' Association
Evelyn Ganzglass, editor, 1992

This collection of papers outlines state strategies for increasing the competitiveness of the U.S. work force within the global economy. Advocates involving the public and private sectors in modernizing manufacturing and developing work force preparation systems. ($16) Upjohn Institute, 300 South Westnedge, Kalamazoo, MI 49007; (616) 343–4330.

The Fourth R: Workforce Readiness
National Alliance of Business, 1987
ED 289 045

This guide explains the types of education partnerships that business can form to prepare students to enter and make a successful adjustment to the workplace. Chapters cover the business consequences of an ill-prepared work force, and the return on business investment in education. ($9.95) National Alliance of Business, 1201 New York Avenue NW, Suite 700, Washington, DC 20005; (202) 289–2910.

A Guide to Working Partnerships
Richard Lacey and Christopher Kingsley, 1988
ED 295 001

Drawing from the experiences of 21 work/education partnership programs sponsored by the Edna McConnell

(continued)

General Reading List (continued)

Clark Foundation, this guide investigates the realities of mobilizing community leaders and of sustaining those leaders' active involvement in a partnership over time. (Free) Center for Human Resources, Heller School, Brandeis University, Waltham, MA 02254–9110; 1–800–343–4705.

Handbook for Principals and Teachers: A Collaborative Approach for Effective Involvement of Volunteers
National Association of Partners in Education, 1989

This manual provides training models to demonstrate how education practitioners can involve volunteers creatively and effectively. ($15) National Association of Partners In Education, 209 Madison Street, Suite 401, Alexandria, VA 22314; (703) 836–4880.

Helping At-Risk Youth Make the School-to-Work Transition
Cheryl Meredith Lowry, 1990
ED 321 158

This ERIC Digest (#101) describes school-to-work transition services, lists barriers to effective delivery of services, and describes models. (Free) ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University, 1900 Kenny Road, Columbus, OH 43210–1090; 1–800–848–4815.

How to Monitor and Evaluate Partnerships in Education: Measuring Their Success
Susan D. Otterbourg, 1990

This guidebook covers monitoring and evaluation procedures for partnership and volunteer programs. Instruments for surveys, record keeping, observations, product evaluation, and interviewing are included. ($32.90) InfoMedia, Inc., P.O. Box 210, Ellenton, FL 34222–0210; (813) 776–2535.

Improving Science Education Through Local Alliances
J. Myron Atkin and Ann Atkin, 1989
ED 314 244

This report focuses on collaborations between public schools and national and corporate laboratories, universities, and museums for the purpose of upgrading K–12 science education. ($10) Network Publications, P.O. Box 1830, Santa Cruz, CA 95061–1830.

Joining Forces: A Report From the First Year
Janet E. Levy and Carol Copple, 1989
ED 308 609

This report examines collaboration between education and human services as a way to help children and families at risk. Descriptions of collaborative initiatives identified through a national survey are included. ($10) National Association of State Boards of Education, 1012 Cameron Street, Alexandria, VA 22314; (703) 684–4000.

Linking America's Schools and Colleges: Guide to Partnerships & National Directory
Franklin P. Wilbur and Leo M. Lambert, 1991
ED 340 332

This guide addresses improving the connection between schools and colleges to increase student achievement. It covers existing programs and services, curriculum and instruction issues, and resource sharing. Descriptions of 343 programs are included. ($24.95) American Association for Higher Education, One Dupont Circle, Suite 600, Washington, DC 20036–1110; (202) 293–6440.

Linking Schools with Human Service Agencies
Carol Ascher, 1990
ED 319 877

This ERIC Digest (#62) addresses barriers to school–human service linkages and identifies characteristics associated with successful programs run on the local level. (Free) ERIC Clearinghouse on Urban Education, Teachers College, Box 40, Columbia University, New York, NY 10027; (212) 678–3433.

A Manager's Handbook to Partnerships
Don Adams and Paul Snodgrass, editors, 1990
ED 332 275

This book covers setting up, operating, and maintaining partnerships. Three detailed case studies and forms are included. ($15.95 plus $2.50 shipping and handling) InfoMedia, Inc., P.O. Box 210, Ellenton, FL 34222; (813) 776–2535.

One on One: A Guide to Establishing Mentor Programs
U.S. Department of Education, 1990
ED 327 344

This guide examines why mentor programs are needed and what being a mentor involves and offers guidelines for developing and implementing mentor programs. It also profiles model programs and describes organizations that can help with program planning and development. ($9.60 plus postage) ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153–2852; 1–800–443–ERIC (3742).

Options for Evaluating the Educational Partnerships Program, 1991–1993
Education Resources Group, Inc., 1991
ED 325 533

This report, commissioned by the U.S. Department of Education, analyzes methodologies for evaluating the effectiveness of the Office of Educational Research and Improvement's Educational Partnerships Program. Issues related to formative versus summative approaches and quantitative versus qualitative data collection are explored. ($6.40 plus postage) ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153–2852; 1–800–443–ERIC (3742).

An Overview of Evaluation Research on Selected Educational Partnerships
Education Resources Group, Inc., 1991
ED 325 536

This report, commissioned by the U.S. Department of Education, reviews selected literature on education-business partnerships, highlighting the methodologies used in partnership evaluations, including document reviews, observations, interviews, surveys, and case studies. The need for more systematic evaluation of partnerships and further refinement of evaluation models is illustrated. ($3.20 plus postage) ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153–2852; 1–800–443–ERIC (3742).

Partnership Evaluation: Simple to Comprehensive
National Association of Partners in Education, 1991

Topics covered in this guide include evaluation steps, design and planning, methods and strategies, program monitoring, economic efficiency, and barriers to partnership development and evaluation. Sample forms are included. ($30) National Association of Partners in Education, 209 Madison Street, Suite 401, Alexandria, VA 22314; (703) 836–4880.

Partnerships in Education: Measuring Their Success
Susan D. Otterbourg and Don Adams, editors, 1989
ED 320 202

This book presents 24 case studies of partnership programs in which monitoring and evaluation have been crucial to program improvement, expansion, and replication. Measurement and evaluation surveys used by the partnerships to assess the impact of their programs are included. ($32.90) InfoMedia, Inc., P.O. Box 210, Ellenton, FL 34222; (813) 776–2535.

A Practical Guide to Creating and Managing a Business/Education Partnership
National Association of Partners in Education, 1990

This guide includes a training manual for community teams and program managers as well as worksheets and sample materials. It covers 12 steps of program development. ($50) National Association of Partners in Education, 209 Madison Street, Suite 401, Alexandria, VA 22314; (703) 836–4880.

The Role of Business in Education
Alan Baas, 1990
ED 321 344

This ERIC Digest (EA 47) describes the type and extent of business involvement in education as well as the advantages of, and potential problems with, such cooperation. ($2.50) ERIC Clearinghouse on Educational Management, University of Oregon, 1787 Agate Street, Eugene, OR 97403–5207; (503) 346–5044.

The Role of the Community College in Economic and Workforce Development
Diane Hirshberg, 1991
ED 339 443

This ERIC Digest presents an overview of the economic development functions community colleges have assumed in recent years on behalf of both the work force and the business community. (Free) ERIC Clearinghouse for Junior Colleges, University of California at Los Angeles, 8118 Math Sciences Building, 405 Hilgard Avenue, Los Angeles, CA 90024; (310) 825–3931.

The Same Client: The Demographics of Education and Service Delivery Systems
Harold L. Hodgkinson, 1989
ED 312 757

This report explores the complex interrelationships among family demography, housing, transportation, health, crime, and education and recommends interagency cooperation and taxpayer investment in families. ($12) Institute for Educational Leadership, 1001 Connecticut Avenue NW, Suite 310, Washington, DC 20036–5541; (202) 822–8405.

School-Community-Business Partnerships: Building Foundations for Dropout Prevention
Harriet Hanauer Bucy, 1990
ED 318 894

This manual presents ideas and approaches for developing partnerships for dropout prevention. It identifies working partnerships and includes a planning and implementation guide. ($8 plus postage) Publications Department, National Dropout Prevention Center, Clemson University, Clemson, SC 29634–5111; 1–800–443–6392.

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General Reading List (continued)

States and Communities on the Move: Policy Initiatives To Create a World-Class Workforce
William T. Grant Foundation Commission on Youth and America's Future, 1991
ED 339 875

This publication reviews new policy initiatives underway to prepare young people for high-skill, high-performance jobs. Among the state-level programs covered are school-to-work transition programs, apprenticeships, community service programs, and school-business collaborations. ($5) William T. Grant Commission on Work, Family and Citizenship, 1001 Connecticut Avenue NW, Suite 301, Washington, DC 20036–5541; (202) 775–9731.

Synthesis of Existing Knowledge and Practice in the Field of Educational Partnerships
Terry Grobe and others, 1990
ED 325 535

This report, commissioned by the U.S. Department of Education, presents a brief history of education partnerships, focusing on the educational impact of various types, including partnerships in social services, in the classroom, in teacher training and development, in management, in systemic educational improvement, and in policy. ($6.40 plus postage) ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153–2852; 1–800–443–ERIC (3742).

Training and Educating the Work Force in the Nineties: The Rationale for Public-Private Collaboration
Thomas J. Smith and Carolyn Trist, 1988
ED 303 679

This report (IN 331) explains how public–private training linkages improve national competitiveness and productivity, increase equity in access to employment, and enhance local economic development. ($6) Center on Education and Training for Employment, 1900 Kenny Road, Columbus, OH 43210–1090; 1–800–848–4815.

Urban School-Community Alliances
Carol Ascher, 1988
ED 306 339

This report, part of the Trends and Issues series (No. 10), describes collaborations between urban schools and businesses, community agencies, cultural institutions, and universities. It outlines principles of successful collaboratives and identifies potential problems and policy concerns. ($3) ERIC Clearinghouse on Urban Education, Teachers College, Box 40, Columbia University, New York, NY 10027; (212) 678–3433.

Vocational Education Involvement with Business/Industry/Labor
Susan Imel, 1991
ED 340 947

This Trends and Issues Alert provides a brief overview of issues and resources related to partnerships between vocational educators and employers, labor, government, and other education institutions. (Free) ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University, 1900 Kenny Road, Columbus, OH 43210–1090; 1–800–848–4815.

What It Takes: Structuring Interagency Partnerships to Connect Children and Families with Comprehensive Services
Atelia I. Melaville and Martin J. Blank, 1991
ED 330 748

This report analyzes factors related to the success of 13 collaborative efforts involving a school and at least 1 human services agency. Guidelines for new partners and a partnership needs assessment are included. ($3) Education and Human Services Consortium, c/o Institute for Educational Leadership, 1001 Connecticut Avenue NW, Suite 310, Washington, DC 20036–5541; (202) 822–8405.

Winning the Brain Race: A Bold Plan to Make Our Schools Competitive
David T. Kearns and Denis P. Doyle, 1988

Drawing on his experience making Xerox competitive, Kearns advocates school restructuring, school choice, and better teacher training to radically improve school achievement and foster U.S. economic competitiveness. ($10.95 plus shipping) Institute for Contemporary Studies, 243 Kearny Street, San Francisco, CA 94108; (415) 981–5353.

Research in Action provides you with a synthesis of recent research findings on current trends and issues in education. These brief analyses cover a broad range of topics important, as well as practical, to educators, parents, and students. Each document reprinted in this column includes references to additional reading materials and information sources on related topics. Published by ERIC's 16 subject-specific clearinghouses as ERIC Digests, many are available free from individual clearinghouses, while others are available for a nominal fee. Subsequent issues of *The ERIC Review* will highlight current Digests from other ERIC Clearinghouses.

School-to-Work Transition: Its Role in Achieving Universal Literacy

by Susan Imel, Director

ERIC Clearinghouse on Adult, Career, and Vocational Education
ERIC Digest Series No. EDO–CE–91–106

The fifth national education goal established by the President and the nation's governors after the Charlottesville education summit in 1989 is achieving universal literacy in the United States. The goal states, "By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship." In a recent article in the *Kappan*, Larry Mikulecky (1990) outlines why "achieving universal literacy within the decade . . . is probably not possible, even with infinite resources" (p. 306). Nevertheless, Mikulecky is optimistic that progress can be made toward universal literacy.

To reach the goal of universal literacy in the United States, five objectives were established. This digest focuses on the first objective—that every major American business will be involved in strengthening the connection between education and work. The issues involved include the need for effective school-to-work transition and its relationship to the literacy goal, the current status of business involvement in this transition, and steps for developing effective connections between education and work.

Why School-to-Work Transition?

Although the goal of universal literacy in the United States refers specifically to the literacy of adult Americans, significant progress toward the goal is dependent to a great extent upon individuals' educational experiences prior to adulthood. Encouraging business involvement in strengthening the connection between school and work acknowledges the relationship between a literate adult population and its prior educational experiences.

Because early education reform efforts focused on college-bound youth, little attention was given to the need for improving school-to-work transitions of non-college-bound youth. However, recent reports such as *The Forgotten Half* (William T. Grant Foundation, 1988) and *America's Choice* (National Center on Education and the Economy, 1990) stress the need to "overcome the

disconnection between education and work" (National Governors' Association, 1990, preface). This renewed emphasis on the school-to-work transition has been prompted by such factors as changing demographics, the need for a more productive and competitive work force, and concern about the economic well-being of many youth.

According to the National Governors' Association (1990, p. 22), "in the past it was possible to tolerate . . . a haphazard approach to school-to-work transition . . . but today the waste in human potential that results no longer can be afforded." Programs that connect students with the business world are needed to give young people both knowledge of work and of themselves (William T. Grant Foundation, 1988).

What Is the Current Status of Business Involvement?

School-to-work issues and solutions (e.g., work-education partnerships and councils) have been on the scene since the 1970s and are again the focus of attention due to the seriousness of the United States' competitiveness problem. During the past decade, business involvement with schools has increased, and, as a result, progress has been made toward strengthening the connection between education and work (Mikulecky, 1990). Results of a *Fortune* magazine survey support this statement. Of the 305 *Fortune* 500 and Service 500 companies responding to the survey, all but 7 (2 percent) reported they were doing something for education. Companies responding affirmatively to the survey were involved in the following activities to help public education: contributing money, 78 percent; offering students summer or part-time jobs, 76 percent; contributing materials or equipment, 64 percent; encouraging employees to run for school boards, 59 percent; participating in school partnerships, 48 percent; offering teachers summer jobs, 26 percent; lobbying legislatures for reform, 22 percent; supporting tax increases or bond issues, 18 percent; and loaning executives to schools, 12 percent (Kuhn, 1990).

Although it is true that more businesses are helping public education, many of the activities listed here do not contribute directly to strengthening the linkages between education and work. In some communities, however, business leaders are entering into a new form of collaboration, known as a work-education partnership, that focuses on education reform and on strengthening the links between education and the workplace for economically disadvantaged youth. Much more complex and sophisticated than traditional school-business partnerships such as Adopt-a-School programs, these partnerships are designed to bring about substantive change in the existing system by changing the nature of school-business partnerships (Lacey and Kingsley, 1988).

Both the Edna McConnell Clark Foundation (Lacey and Kingsley, 1988; Lefkowitz, Kingsley, and Hahn, 1987) and the National Alliance of Business (NAB) (1989) have been involved in fostering work-education partnerships in a number of cities throughout the country. Designed to bring an array of public and private resources to bear on the transition from school to work, both the Edna McConnell Clark Foundation and the NAB projects sought to form and sustain alliances among groups of employers rather than individual firms and among school systems rather than single schools, using combinations of government and private funding rather than a single source. The experiences of these projects provide valuable lessons to businesses wishing to strengthen the relationship between education and work.

What Makes Effective Work-Education Partnerships?

By their very nature, work-education partnerships vary. They take place in different communities under unique circumstances, involving distinctive sets of key players. Nevertheless, an examination of the reports by Lacey and Kingsley (1988) and NAB (1989) reveals that effective partnerships share a number of common elements:

- **Brokering**. An intermediary or "broker" is crucial for developing links among all the players in a successful work-education partnership. In order for brokers to facilitate cross-sector collaboration, they must be able to operate in several contexts. Brokers help translate differences in terminology, context, and cultures and help create a sense of common ownership among the key players. Once established, the broker may become responsible for governance of the partnership.

- **Involving the right players**. Partnerships achieve their maximum potential when the right mix of people from many organizations are involved. A core group of high-level leaders from the various sectors who endorse the mission of the partnership and agree to share the risks and benefits equally is essential for success.

- **Ensuring commitment**. Commitment to the partnership is fostered by developing a sense of ownership among the various organizations. The commitment must be long-term, sustained, and emerge from all sectors involved in the partnership. Top-level leaders should understand that there are no "quick fixes" and must be willing to assign time, money, and human resources to the partnership effort.

- **Developing a formal plan**. Formal plans that include both long- and short-term goals, measurable objectives, concrete tasks, and specifications defining responsibilities and deadlines provide a foundation for successful partnerships. Goals serve as an incentive and as a means for measuring accountability. In addition, a collaborative process for deciding goals and objectives can ensure consensus and expand ownership of the project. The best plans include an obvious chain of command, are signed by all top leaders, and are publicized.

- **Implementing the plan**. Establishing an organization to manage the day-to-day operation of the partnership and evaluate its efforts is important. The management role may be assumed by the Private Industry Council, the local chamber of commerce, or by an organization created especially for the purpose of managing the partnership. The management function may emerge from the initial brokering efforts of an intermediary organization.

- **Maintaining the partnership**. Partnerships must be cultivated and

maintained. Time and effort should be devoted to preparing for the inevitable changes that will result over the life of a partnership. For example, evaluation results will often mandate procedural changes. Original partners may withdraw and new ones may be recruited to take their places. The partnership must be nurtured and sustained in order to maintain its vitality.

What Next?

By the year 2000, will every American business be involved in strengthening the connection between education and work? Certainly the results of the *Fortune* survey (Kuhn, 1990) are encouraging, since they indicate that business is involved with public education in a variety of ways. The challenge now is to channel this involvement into the development of the type of work-education partnerships fostered by the Edna McConnell Clark Foundation and the National Alliance of Business. However, for these partnerships to be successful, business must increase its understanding of the type of educational reform required—that which facilitates and enhances school-to-work transition.

References

Kuhn, S. E. (Spring 1990). "How Business Helps Schools." *Fortune*, 121 (12): 91–94.

Lacey, R. A. and C. Kingsley (1988). *A Guide to Working Partnerships*. Waltham, MA: The Center for Human Resources, Heller Graduate School, Brandeis University. ED 295 001.

Lefkowitz, B., C. Kingsley, and A. Hahn (1987). *Working Partnerships Casebook*. Waltham, MA: Center for Human Resources, Heller Graduate School, Brandeis University. ED 295 002.

Mikulecky, L. (December 1990). "National Adult Literacy and Lifelong Learning Goals." *Phi Delta Kappan*, 72 (4): 304–309.

National Alliance of Business (1989). *The Compact Project: School-Business Partnerships for Improving Education*. Washington, DC: National Alliance of Business. ED 312 487.

National Center on Education and the Economy (June 1990). *America's Choice: High Skills or Low Wages!* The Report of the Commission on the Skills of the American Workforce. Rochester, NY: NCEE. ED 323 297.

National Governors' Association (1990). *Educating America: State Strategies for Achieving the National Education Goals*. Report of the Task Force on Education. Washington, DC: NGA.

William T. Grant Foundation (January 1988). *The Forgotten Half: Non-College Youth in America*. An Interim Report on the School-to-Work Transition. Washington, DC: Commission on Work, Family and Citizenship. ED 290 822.

For Your Information

ACCESS ERIC Gets New Toll-Free Number

ACCESS ERIC, the ERIC System's promotional and outreach arm, has a new toll-free telephone number: 1–800–LET–ERIC (538–3742). This number, which replaces 1–800–USE–ERIC, went into effect in late August.

In August, the contract to operate ACCESS ERIC was awarded to Aspen Systems Corporation in Rockville, Maryland. Aspen managed ACCESS ERIC for the first 3 years of operation and will continue for another 3-year term.

Department of Education Announces Clearinghouse Competition

The Department of Education will conduct a competition for the award of the 16 subject-specific ERIC Clearinghouses. The Request for Proposal is scheduled to be issued in mid-October. The period of performance will be for 5 years from the date of the award.

1993 Calendar and *Catalog of Clearinghouse Publications* Available From ACCESS ERIC

Now is the time to order your *1993 ERIC Calendar of Education-Related Conferences*, a compilation of hundreds of international, national, regional, and state conferences to be held within the next 12 months. Each entry includes conference site, sponsor, contact person, registration information, estimated attendance, and target audiences. Five indexes are included to help you identify conferences according to name, date, geographic location, sponsor, or subject. Order the *1993 Calendar* from ACCESS ERIC for $20 prepaid. Calendars will be available in December 1992.

The 16 ERIC Clearinghouses in the ERIC System are subject authorities responsible for acquiring significant literature within their scope and cataloging, indexing, and abstracting it for the ERIC database. In addition, they produce research summaries called ERIC Digests, as well as bibliographies, information analyses, and other products. Many of these titles are available free or at a very low cost. *The Catalog of ERIC Clearinghouse Publications* offers a complete listing of titles available from the Clearinghouses. It includes ordering information and a comprehensive subject index. *The Catalog of ERIC Clearinghouse Publications*, $10 prepaid, will be available from ACCESS ERIC in early 1993.

New Titles in Education

This column features new publications produced by the ERIC Clearinghouses and the Office of Educational Research and Improvement, as well as selected resources recently abstracted from the ERIC database. Title, author, availability, cost, order number, and a brief description are provided to help you locate these resources easily through ERIC.

If a publication is for sale, the price is listed; make your check or money order payable to the organization receiving your order. To expedite handling, please refer to the order number (if provided) as well as the title.

For readers interested in other education titles, *The Catalog of ERIC Clearinghouse Publications* is a comprehensive listing of free and low-cost education materials produced by the Clearinghouses and support components. To order the *Catalog*, send a check or money order for $8 to ACCESS ERIC, 1600 Research Boulevard, Rockville, MD 20850–3172.

dult, Career, and Vocational Education

Order these publications from Center Publications, Center on Education and Training for Employment, 1900 Kenny Road, Columbus, OH 43210–1090; 1–800–848–4815.

Cognitive Theory-Based Teaching and Learning in Vocational Education, 1992
Ruth G. Thomas
IN 349; $8.75

Reviews research on theories of cognition in relation to vocational curriculum and instruction. Explores the development of higher order thinking skills through vocational education.

A Multicultural Focus on Career Education, 1991
Don C. Locke and Larry D. Parker
IN 348; $5.25

Discusses career educator implications of the increasing cultural diversity of the United States. Questions the relevance of existing career development theories and identifies appropriate interventions for specific groups.

ounseling and Personnel Services

Order these publications from the ERIC Clearinghouse on Counseling and Personnel Services, University of Michigan, School of Education, Room 2108, 610 East University Street, Ann Arbor, MI 48109–1259; (313) 764–9492.

Helping Children Cope With Fears and Stress, 1992
Edward H. Robinson, Joseph C. Rotter, Mary Ann Fey, and Kenneth R. Vogel
EC188; $16.95

Part 1 of this guide includes a discussion of and activities for helping K–8 students cope with fears and stress. Activities are designed to be integrated into various curricular areas. Part 2 is a facilitator's guide for counselors and teachers.

Student Self-Esteem: A Vital Element of School Success, 1992
Garry R. Walz and Jeanne C. Bleuer
EC193; $26.95

Brings together 59 articles offering practical and field-validated program and practice ideas for building K–12 student self-esteem. Topics include self-esteem; academic achievement; students at risk; career development; and gender, racial, and ethnic factors.

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Order these publications from the ERIC Clearinghouse on Educational Management, University of Oregon, 1787 Agate Street, Eugene, OR 97403–5207; (503) 346–5043.

Graying Teachers: A Report on State Pension Systems and School District Early Retirement Incentives, 1992
Frank Auriemma, Bruce Cooper, and Stuart C. Smith
$10.50 if prepaid; add $3 handling if billed

Summarizes research on retirement programs and includes state-by-state comparisons of offerings. Written for school district personnel, school board members, administrators, and teachers' union representatives.

Sounding Board, 1992
Prepared for the U.S. Department of Education's Urban Superintendents' Network
$2.50 each issue

Two issues of a series on management in urban school districts are now available. The first focuses on urban superintendent retention, school board-superintendent relations, and the changing expectations of chief executives. The second issue addresses school collaborations with social service agencies.

lementary and Early Childhood Education

Order this publication from the Southern Association on Children Under Six, P.O. Box 5403, Little Rock, AR 72215–5403; (501) 663–0353.

The Portfolio and Its Use: Developmentally Appropriate Assessment of Young Children, 1992
Southern Association on Children Under Six
$10

Covers using portfolios—collections of work samples, activity records, observational notes, photos, and audio and video recordings—as a basis for instructional decisions about the achievement and progress of school children.

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Order these publications from the ERIC Clearinghouse on Handicapped and Gifted Children, The Council for Exceptional Children (CEC), 1920 Association Drive, Reston, VA 22091–1589; (703) 264–9467.

How to Find Answers to Your Special Education Questions, 1992
Judy Barokas and Dianna Pinkerton
R637; $10 ($7 for CEC members)

Explores traditional information-gathering strategies as well as the use of computerized information databases to find answers to questions about exceptional students.

Programs and Practices in Gifted Education: Projects Funded by the Jacob K. Javits Gifted and Talented Students Education Act of 1988, 1992
Sandra L. Berger, editor
R636; $18 ($12.60 for CEC members)

Directory of 46 projects; provides information on what has been accomplished by projects serving difficult-to-identify, culturally and linguistically diverse, and underachieving gifted and talented populations.

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Order these publications from the ERIC Clearinghouse on Higher Education, The George Washington University, One Dupont Circle NW, Suite 630, Washington, DC 20036–1183; (202) 296–2597.

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John R. Wilcox and Susan L. Ebbs
ASHE–ERIC Report 1, 1992; $17

Addresses the need for institutional self-scrutiny and includes chapters on leadership, the professorate, and campus culture. Revisits such ethical problems as defining and assessing academic integrity, freedom of speech, and the conflicts between the rights of the individual and the needs of the academic community.

Preparing for a Global Community: Achieving an International Perspective on Higher Education, 1992
Sarah M. Pickert
ASHE–ERIC Report 2, 1992; $17

Presents the history and current state of international education in the United States. Discusses such topics as curriculum reform, including interdisciplinary approaches; professional schools; the international baccalaureate; study-abroad and foreign student issues; and administration of international education programs.

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Order these publications from the ERIC Clearinghouse on Information Resources, 030 Huntington Hall, Syracuse, NY 13244–2340; (315) 443–3640.

Libraries for the National Education Goals and America 2000, 1992
Barbara Stripling
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Synthesizes information from the ERIC database, journal literature, and the U.S. Department of Education's Office of Library Programs to show how libraries support such aims as preparing children for school, increasing the high school graduation rate, promoting literacy and lifelong education, and improving educational achievement in critical subjects.

Trends and Issues in Educational Technology, 1991, 1992
Donald P. Ely, Anne Foley, Wendy Freeman, and Nancy Scheel
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Provides a state-of-the-art analysis of the field of educational technology and its personnel, tools, and applications. Literature reviewed includes five professional journals, dissertations from five leading educational technology programs, proceedings from three national and international conferences, and ERIC input.

Junior Colleges

Order these publications from Jossey-Bass Inc., Publishers, 350 Sansome Street, San Francisco, CA 94101; (415) 433–1740.

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Billie Wright Dziech and R. William Vilter, editors
No. 78; $15.95

Discusses how community college faculty and staff can change the negative perceptions of community colleges that are held by faculty at baccalaureate institutions.

Maintaining Faculty Competence: New Directions for Community Colleges, 1992
Keith Kroll, editor
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Paula M. Conru, Vickie W. Lewelling, and Whitney Stewart
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Presents a key component of the knowledge base for beginning teachers—a framework of culturally responsive teaching for the nation's increasingly diverse student population.

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Raising Standards for American Education: A Report to Congress, the Secretary of Education, the National Education Goals Panel, and the American People, 1992
National Council on Education Standards and Testing
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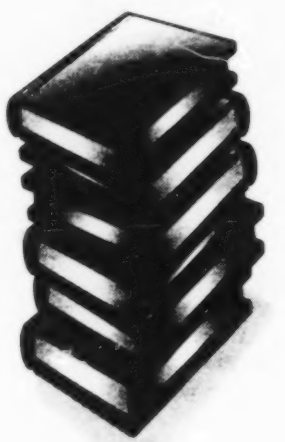

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